GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

STARRED QUESTION NO:294
ANSWERED ON:10.12.2002
AVAILABILITY OF BIO TECHNOLOGICAL PRODUCTS
HARIBHAI PARTHIBHAI CHAUDHARY;RAM TAHAL CHOUDHARY

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the measures being taken to make available the bio-technological products to the farmers; and

(b) the amount spent on each of such measures during the last three years and the number of farmers benefited by these products, State-wise?

Answer

MINISTER OF HUMAN RESOURCE DEVELOPMENT, SCIENCE AND TECHNOLOGY AND OCEAN DEVELOPMENT MURLI MANOHAR JOSHI)

(a) & (b) : A Statement is laid on the Table of the House.

STATEMENT IN RESPECT OF STARRED QUESTION NO. 294 TO BE ANSWERED ON 10/12/2002 REGARDING AVAILA OF BIO-TECHNOLOGICAL PRODUCTS

For Research & Development in the area of agriculture biotechnologyincluding transgenic plants, tissue culture, biofertilizers, biopesticides, and animals and microbes, a strong infrastructure has been set up. National Containment-Cum-Quarantine Facility for transgenic planting material and National Facility for Virus Diagnosis and Quality Control for tissue culture plants for testing and certification and biosafety regulations along with the mechanisms of implementation under the Environment Protection Act-1986 are in place. A National Plant Genome Centre in New Delhi is working on genomics of plants covering in particular nutritional aspects.

Recently, 3 Bt. cotton hybrids expressing Cry1Ac gene have been approved for commercial cultivation and seeds of these hybrids were made available to the farmers during Kharif 2002 for cultivation in over 70,000 acres in six states namely Gujarat, Madhya Pradesh, Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh.

A high yielding bold seeded and shatter resistant mustard variety - Pusa Jaikisan developed through tissue culture has already been released in the country, which has become very popular among the farmers of Rajasthan, Haryana, Madhya Pradesh and part of Uttar Pradesh. Tissue culture raised plants of important Agroforestry species - teak, bamboo, populus, eucalyptus, paulownia and other crops such as potato and sugarcane have been supplied to the farmers. Field demonstrations and training on raising tissue culture vanilla and large cardamom plants have been undertaken in Kerala, Karnataka, Tamil Nadu, and Sikkim and West Bengal states respectively have been successfully conducted. The efficacy of biofertilizers and biocontrol agent/biopesticides has been demonstrated in various agro climatic zones. Packages for mass production of biocontrol agents/biopesticides such as Trichoderma viride and T.virens, Trichogramma, NPV of Heliothis and biofertilizers such as Rhizobium, Blue Green Algae (BGA) & Mycorrhiza have been transferred to industry.

New animal vaccines, diagnostics and embryo transfer technology have been used in the farm animals. Bovine Rhinotracheitis (IBR) vaccine, Diagnostic test for peste des petis ruminants virus and Recombinant protective antigen (rPA) against Anthrax have been transferred to industry.

The amount spent during last three years in different areas is given below:

(Rs. in lakhs)

	1999-2000	2000-01	2001-02	Total
i) Agriculture Biotechnology (including development of transgenics, biofertilizer, biopesticides)	1360	1158	1428	3946
ii) Plant Biotechnology/	750	635	830	2215

Tissue Culture

iii)Animal Biotechnology 310 300 300 910

Grand Total 2420 2093 2558 7071

Over 80,000 farmers have benefited during last three years through field demonstrations and training on production and use of certain biotechnological products particularly biofertilizers and biopesticides. State wise break up of the approximate number of beneficiaries is :

Andhra Pradesh-4500, Arunachal Pradesh-1100, Assam-1500, Chhattisgarh-1000, Gujarat-8000, Haryana-1000, Himachal Pradesh-1100, Jammu and Kashmir-4500, Jharkhand-500, Karnataka-5000, Kerala-2500, Madhya Pradesh-2000, Maharashtra-11500, Manipur-1000, Meghalaya-500, Orissa-800, Punjab-1000, Rajasthan-4000, Sikkim-200, Tamil Nadu-12000, Tripura-500, Uttar Pradesh-11000, Uttranchal-1300, West Bengal-6000.